Abstract

A superconducting wire [[(10)]] formed of a metal substrate and an overlying superconducting layer [[(3)]], the metal substrate being a textured metal substrate and planarized to have a surface layer extending from a surface thereof to a depth of 300 nm with a crystal axis offset relative to an orientation axis by at most 25° and a surface roughness $R_{P-V}$ of at most 150 nm, and a method of producing the wire. The surface layer's biaxial texture can be maintained while the substrate can have a surface planarized, and a highly superconductive wire and achieve a method of producing the same can thus be achieved.